A.I.A. FILE No. 27-C

CATALOG No. 59

18b
Da

wood window hardware

Quality Craftsmanship
AWI
ARCHITECTURAL WOODWORK INSTITUTE

PIONEERS OF AWNING-TYPE WINDOWS SINCE 1910

TYPICAL FENESTRATION IN SEVERAL THOUSAND SCHOOLS
BY KISTNER, WRIGHT & WRIGHT, A.I.A.

Maximum ventilation in warm weather

Sheds water and prevents drafts in rainy and windy weather

100% controlled at lower sash

Control of all Sash at Lower Sash with Hardware A-1, M-3 or P-4 . . . Assures controlled draftless ventilation . . . more efficient work . . . more joyful play . . . No colds, discomforts or foul air fatigue. Unnecessary to use sash poles, move shades or blinds.

A.I.A. file folder containing this catalog and Dalmo scale details available on request.

Since 1910 many million sash operated on DALMO attest to the sturdiness and durability of construction, assuring years of trouble free service . . . easy smooth operation . . . simple rapid installation.

Sash reverse for convenient safe cleaning from inside.

Simple to screen, weatherstrip and double glaze.

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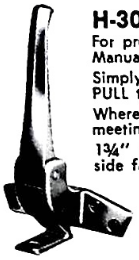
Dalmo Drawings must be used for frames and sash to receive hardware items indexed above . . . complete sets of these drawings are available from Builders' Hardware Dealers, Dalmo Agents or write us.

DALMO Continental inc.

HOME OFFICE—1604 WILSHIRE BLVD., LOS ANGELES 17, CALIF.

FINISH HARDWARE

Heavy Duty . . . Precision Manufactured . . . Finely Finished.
Standard finishes: US-4, US-10, US-26, US-26D, aluminum and bronze lacquer.



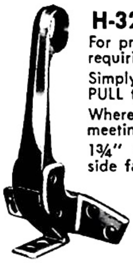
H-30

For project-out sash — Manually operated.

Simply PUSH to open . . . PULL to close and lock.

Where fastener occurs at meeting rail, order H-30X.

1¾" projection from inside face of sash.



H-32

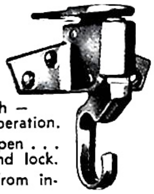
For project-out sash — requiring pole operation.

Simply PUSH to open . . . PULL to close and lock.

Where fastener occurs at meeting rail, order H-32X.

1¾" projection from inside face of sash.

FOR TRANSOM SASH

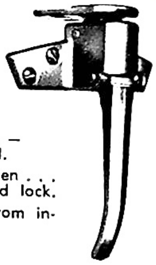


H-40

For **project-in** sash — requiring pole operation.

Simply PULL to open . . . PUSH to close and lock.

1⅜" projection from inside face of sash.

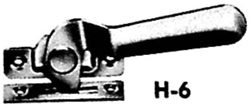


H-45

For **project-in** sash — Manually operated.

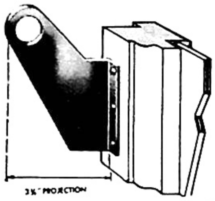
Simply PULL to open . . . PUSH to close and lock.

1⅜" projection from inside face of sash.



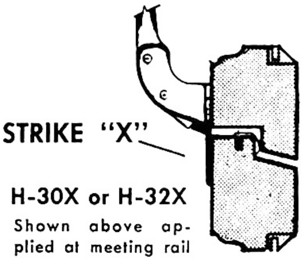
H-6

For use with awning or transom sash . . . economical in price . . . fabricated of wrought steel . . . available right or left handed . . . finished US-2C or US-20 only . . . projection ⅞" from inside face of sash.



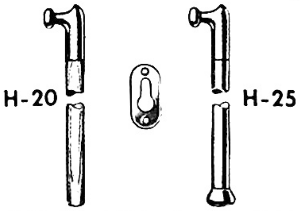
H-54 STILE BRACKET

For sash requiring pole operation . . . installs at upper sash corner.



H-30X or H-32X

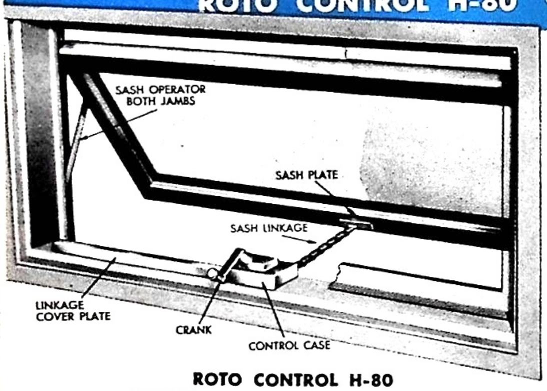
Shown above applied at meeting rail



H-20 Wood Pole, Bronze Finish Hook and Hanger.

H-25 Aluminum Pole, Hook and Hanger, Natural Finish.

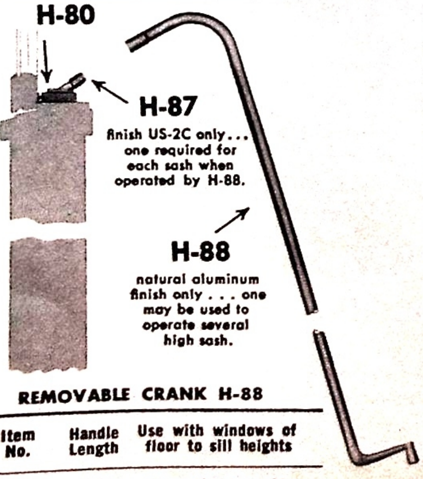
ROTO CONTROL H-80 • ADAPTOR H-87 • REMOVABLE CRANK H-88



ROTO CONTROL H-80

Item No.	Max. Opening	Use with sash of heights
H80-1	12"	from 14" to 18"
H80-2	15"	from 18" to 23½"
H80-3	18"	from 23½" to 30"

Minimum Sash Width 24"



H-87

finish US-2C only . . . one required for each sash when operated by H-88.

H-88

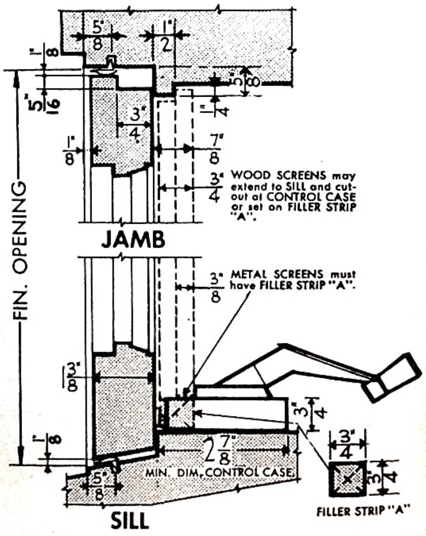
natural aluminum finish only . . . one may be used to operate several high sash.

REMOVABLE CRANK H-88

Item No.	Handle Length	Use with windows of floor to sill heights
H88-10	40"	from 6'0" to 7'4"
H88-20	56"	from 7'4" to 8'8"
H88-30	73"	from 8'8" to 10'0"

OPERATES AWNING SASH THROUGH FIXED SASH

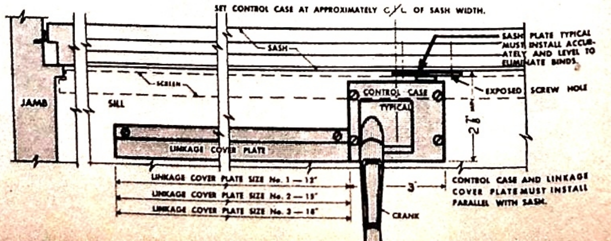
Roto Control H-80, complete hardware for one Awning Sash is made in three sizes . . . control case is worm and gear type operated by a crank. It moves the sash linkage, which becomes rigid when extended . . . sash lock in all open and closed positions . . . are easy to clean from inside. **H-80** is of sturdy construction . . . attractive appearance . . . easy to install . . . sash operators are of steel, cadmium plated with brass slide shoes and rivets . . . sash linkages and sash plates are also of steel, cadmium plated . . . control case, crank and linkage cover plate visible from inside of room, available in stock finishes of aluminum or bronze lacquer; and in special finishes of US-10, US-26 or US-26D.



Adapters H-87 and **Removable Cranks H-88** are for operating **H-80's** out of hand reach from floor . . . simply remove standard crank and replace with **H-87.**

For detail information showing additional screen and sill applications and installation instructions refer to **Dalmo Drawing RC-1,** included in our complete set of drawings available from Builders Hardware Dealers, Dalmo Agents, or write us.

Roto Control H-95, not illustrated, is similar to **H-80** . . . of heavy duty construction with cut steel worm and gear, cast brass control case, and horizontal crank made to fit sill depth . . . available in US-10, US-26 or US-26D finishes.



SET CONTROL CASE AT APPROXIMATELY C/L OF SASH WIDTH.
SASH
SASH PLATE TYPICAL MUST INSTALL ACCURATELY AND LEVEL TO ELIMINATE BINDS.
SCREEN
EXPOSED SCREW HOLE
JAMB
SILL
CONTROL CASE TYPICAL
2 7"/8
LINKAGE COVER PLATE
LINKAGE COVER PLATE SIZE No. 1 — 12"
LINKAGE COVER PLATE SIZE No. 2 — 15"
LINKAGE COVER PLATE SIZE No. 3 — 18"
3"
CONTROL CASE AND LINKAGE COVER PLATE MUST INSTALL PARALLEL WITH SASH.
CRANK

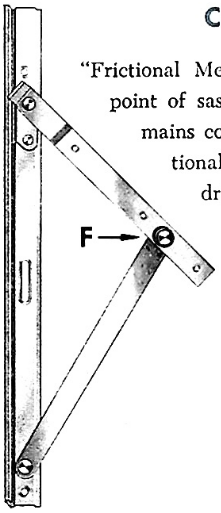
SINGLE SASH OPERATION
for AWNING, TRANSOM and CASEMENT SASH

CONTINENTAL and DACON SASH OPERATORS are preferably for use in windows of one Operating Sash . . . simple milling requirements, plus easy, rapid installation, insure economy . . . Weatherstrip, screens, double glazing, shading or storm sash easily applied . . . Sash reverse for safe convenient cleaning from inside.

CONTINENTAL and DACON SASH OPERATORS are available in solid brass or in steel, cadmium plated, with brass slide shoes and rivets . . . they have "Frictional Means" for holding sash in any desired position against wind pressure . . . Installation features: Sash Plate Locating Angles correctly position sash, tracks with smooth inside surface will not gouge or scratch jambs, and all screw holes are templated.

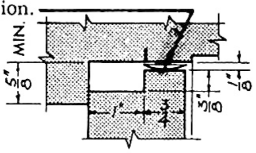
For Fasteners and other Finish Hardware items, refer Page 2. . . . For Frame and Sash Details refer to Drawing CD-1, which is available in our complete set of drawings from Builders' Hardware Dealers, Dalmo Agents or write us.

CONTINENTAL SASH OPERATORS . . . "C" SERIES



"Frictional Means" at location "F" is at balancing point of sash—the only location where friction remains constant at any open position—the "Frictional Means" concealed in a small hole drilled in sash is protected from the weather.

To receive weatherstrip, frames must have kerfs 1/16" wide x 1/4" deep around their perimeter at this location.



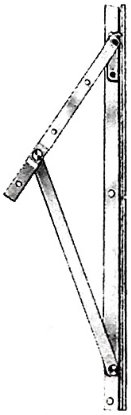
Rabbet required for Continental Sash Operators

Continental Sash Operators are of sturdy, precision manufacture for heavy duty service . . . operate smoothly and evenly . . . no chatter or rattle . . . give a lifetime of trouble-free service without lubrication or attention.

Continental Sash Operators may be used with sash of varying thickness 1⅜", 1¾" and 2¼" . . . sash should be 1¾" thick or more to properly weatherstrip.

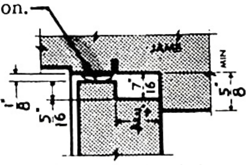
FOR SASH OF HEIGHTS	STEEL PLATED	SOLID BRASS
12" to 18"	C-12	C-12B
18" to 24"	C-16	C-16B
24" to 30"	C-20	C-20B
30" to 36"	C-26	C-26B
36" to 44"	C-32	C-32B
44" to 52"	C-40	C-40B
52" to 60"	C-48	C-48B

DACON SASH OPERATORS . . . "D" SERIES



The minimum rabbet, as shown in detail below, required for Dacon Sash Operators, permits easy, economical weatherstripping of a 1⅜" thick sash.

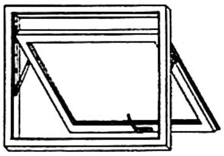
To receive weatherstrip, frames must have kerfs 1/16" wide x 1/4" deep around their perimeter at this location.



Rabbet required for Dacon Sash Operators

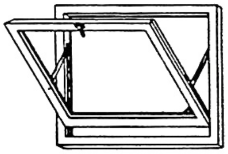
Dacon Sash Operators combine quality with economy . . . friction washers are located at all rivets to hold sash in any open position . . . will give a lifetime of service when sash are of medium size and weight.

FOR SASH OF HEIGHTS	STEEL PLATED	SOLID BRASS
9" to 13"	D- 8	D- 8B
13" to 18"	D-12	D-12B
18" to 23"	D-16	D-16B
23" to 27"	D-20	D-20B
27" to 32"	D-24	D-24B



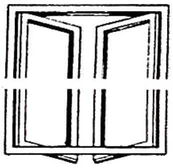
AWNING SASH

1% to 100% controlled ventilation under all weather conditions . . . no drafts . . . no rattles.



TRANSOM SASH

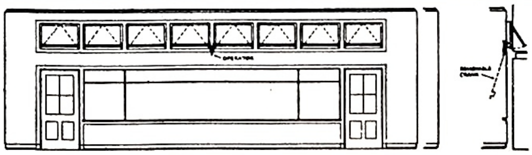
remain in any open position . . . no slamming . . . replace at less cost, chains and butts with their limited single open position.



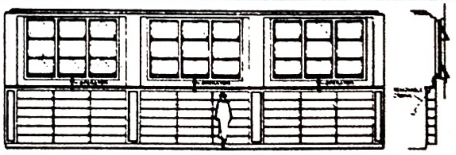
CASEMENT SASH

reverses single casement sash for cleaning . . . replaces at less cost butts and adjusters . . . to use sash operators with casement sash . . . use sash widths in lieu of heights.

MECHANICAL CONTROL C-8 FOR HIGH AWNING SASH



typical single sash mechanically controlled



typical multiple sash mechanically controlled

Mechanical Controls with Removable Crank Operation provide "Remote Control" for high horizontal banks of single or multiple sash windows . . . each bank of windows requires one or more power stations with vertical shafts extending downward for operation by removable crank . . . attach shafts extending horizontally just above sills to power station; levers attach to horizontal shafts and sash move in unison when shaft is rotated by power station . . . mechanical controls are available in concealed or exposed types.

Concealed Type: must be used with Hardware M-3. Power stations may be concealed in wide non-structural mullion, in wall at either end of bank, or exposed on sill. Shafts extending horizontally pass through holes drilled in jambs and mullions. Lever arms for moving sash are concealed behind stops.

Exposed Type: may be used with Continental Sash Operators or Hardware M-3. All parts of Mechanical Controls described above attach to interior face of window frames or walls exposed to view.

Send sketches of windows and wall conditions with dimensions. Drawings and recommendations will be forwarded to you.

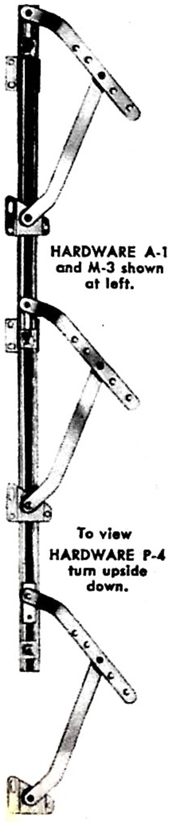
MULTIPLE SASH OPERATION with hardware A-1 • M-3 • P-4

Frames and Sash must be milled to our drawings . . . for Hardware A-1 or M-3, use Dalmo Drawings AM-1 or AM-3 . . . for Hardware P-4 use Dalmo Drawing P4-1 or P4-3.

The above Drawings showing Sash 1¾" and 2¼" thick are included with our complete sets of drawings, available from Builder's Hardware Dealers or write us . . . our drawings must be used for Hardware A-1 • M-3 • P-4.

Multiple Sash Operation is available in three types, (see below); each type has features desirable for usage under varying conditions . . . individual sash may vary from 1'6" to 3'6" in height and to 4'0" in width as shown in dimensional chart below . . . flexibility is the keynote in determining the window dimensions and the number of sash in the window . . . fixed and operating sash may be interspersed as desired.

With above hardware, manual operation of lower sash controls movement of all sash in window . . . quick and easy re-adjustment of sash to conform to changing weather conditions . . . all sash are locked in closed position by lower sash . . . unnecessary to lift shades or blinds, or to use poles to operate sash . . . easy, safe cleaning from inside . . . easy to screen, double glaze, control light, and simple to install . . . a child can operate a Dalmo Window.



HARDWARE A-1 and M-3 shown at left.

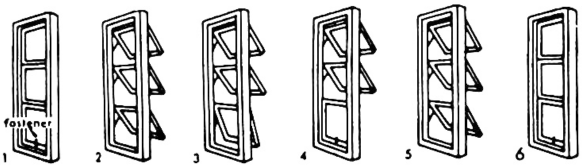
To view HARDWARE P-4 turn upside down.

A-1 AWNING MULTIPLE SASH . . . WITH INDEPENDENT CONTROL OF LOWER SASH

permits closing of lower sash while upper sash remain open

Insures flexibility of ventilation under adverse weather . . . eliminates drafts . . . for use with windows of two to four operating sash in height.

Use Fastener H-30 or H-32. (See Page 2.) . . . Hardware A-1 cannot be used with Roto Controls H-90, H-95, or Mechanical Controls.



TO OPEN—(1) Push fastener . . . (2) Open sash to desired position . . . (3) Return lower sash to partially open position . . . (4) or fully closed.

TO CLOSE—Open lower sash until it connects with upper sash . . . (6) Pull sash shut . . . locking is automatic.

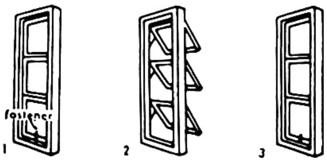
M-3 AWNING MULTIPLE SASH . . . ALL SASH OPERATE IN UNISON

ideal for windows operated with Roto Control H-90 or H-95 with fixed screens or windows with floor to sill heights of 4.0" or more

To use Roto Control H-90 or H-95 refer below.

Use Fastener H-30 (See Page 2) for floor to sill heights to 5'3" . . . Use Fastener H-32 (See Page 2) for floor to sill heights of 5'3" to 6'6". Use Mechanical Controls (See Page 3) for operating high sash in banks.

For use with windows of one to four operating sash in height.



TO OPEN—(1) Push fastener . . . (2) Open sash to desired position.

TO CLOSE—(3) Pull sash shut . . . locking is automatic.

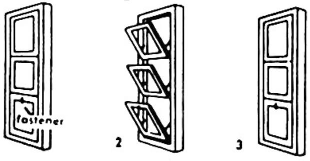
TRANSOM MULTIPLE SASH . . . ALL SASH OPERATE IN UNISON

use with windows requiring outside fixed screens and wire guards, or where privacy is desired as sash glazed with obscure glass act as sight baffles.

Recommended for use in showers, toilets, kitchens, dining rooms, etc.

Use Fasteners H-40 or H-45 (see Page 2). Hardware P-4 cannot be used with Roto Controls H-90, H-95 or Mechanical Controls.

For use with windows of one to four operating sash in height.



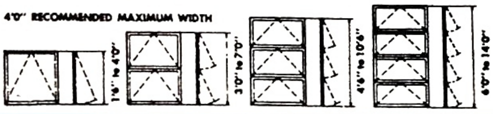
TO OPEN—(1) Pull fastener . . . (2) Open sash to desired position.

TO CLOSE—(3) Push sash shut . . . locking is automatic.

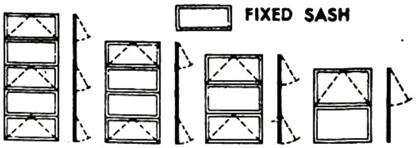
DIMENSION CHART

▭ **OPERATING SASH**

FRAME HEIGHT determines the number of Sash in a Window when all Sash Operate. →



VARIATIONS → Operating and Fixed Sash may be combined in a Window. Each Operating Sash must not be over 3'6" high.



▭ **FIXED SASH**

ROTO CONTROL H-90 and H-95 for use with hardware M-3, only

ROTO CONTROL H-90 is identical to H-80 on Page 2, except window dimensions must be within limitations in Chart at right . . . Adapter H-87 and Removable Crank H-88 on Page 2, are usable with the H-90.

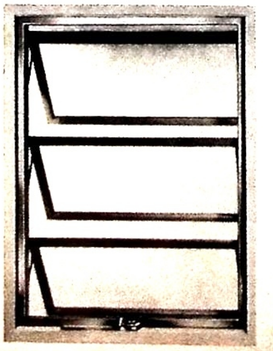
For Hardware M-3 use Drawing AM-1 or AM-3 and for applying H-90 and fixed screens use stops shown in Drawing RC-1 included in file folder.

CHART H-90

DIMENSIONS and NUMBER OF SASH IN WINDOW UNIT

Sash per Window	Height Min. to Max.
1 Sash High	1'6" to 2'6"
2 Sash High	3'0" to 4'0"
3 Sash High	4'6" to 6'0"
4 Sash High	6'0" to 8'0"

Min. Sash Width 2'0" to Max. Sash Width 3'0"



ROTO CONTROL H-95 similar to H-90, requires same frame and sash detailing procedure . . . The H-95 of heavy duty construction has cut steel worm and gear, cast brass control case with a horizontal crank made to length to fit sill depth . . . Will operate sash to maximum sizes shown in DIMENSIONAL CHART under "MULTIPLE SASH OPERATION," above.

For Hardware M-3 use Drawing AM-1 or AM-3 and for applying H-95 and fixed screens use stops shown in Drawing RC-1 included in file folder.

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